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Comments to the Blue Ribbon Commission on America's Nuclear Future
June 16, 2010

Mr. Timothy A. Frazier
Designated Federal Official
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585
Comments submitted in accordance with 75 FR 25850, May 10, 2010, via CommissionDFO@nuclear.energy.gov

Dear Mr. Frazier:

We appreciate the opportunity to submit comments to the Commission. We also appreciate the measures taken by the Commission to facilitate public comments, by allowing electronic submittal of comments, and by placing transcripts and video webcasts of Commission proceedings on a publicly available web site. Moreover, we commend the Commission for holding its July public meeting at Hanford, which contains a lasting legacy of reprocessing, in the form of more than 50 million gallons of highly radioactive liquid wastes stored in aging underground tanks. Below please find comments from the Hanford Task Force of the Washington State Chapter of Physicians for Social Responsibility. We summarize our comments below, then provide more details in the material that follows.

1. In 2004, the chairs of nine site specific advisory boards at DOE locations where legacy contamination was being cleaned up jointly proposed a National Stakeholder Forum to produce comprehensive solutions to DOE's own national waste disposition and materials management challenges. We recommend that the Commission seriously consider the Forum as a method of encouraging broad public participation in atomic waste disposition decisions.

2. The environmental and financial history of reprocessing is overwhelmingly negative.

3. We urge the Commission to avoid the phrase "waste disposal," which currently is an unrealistic concept for high level atomic wastes. Responsible proposals amount to management and guardianship until radioactive decay reduces nuclides to levels considered acceptable. In that context, we urge the Commission to evaluate the radioactive inventory in atomic wastes represented by very long-lived nuclides.

4. Hanford is not a suitable site for atomic waste or hazardous chemicals from other locations.

5. With regard to nuclear proliferation considerations, there is not a dime's worth of difference between technologies used with "Atoms for Electricity" and "Atoms for Bombs."

6. The history of radioactive waste has been consistently characterized by too many cases where public officials have been all too willing to assign management, and associated financial responsibilities, for commercial atomic wastes to the federal government. Accordingly, the Commission's recommendations will not be credible if they include measures that continue to socialize the atomic industry's costs and management of its wastes.

Detailed comments

1. DOE process for decisions on its own material disposition challenges

The Commission has already received presentations on some of the radioactive and hazardous chemical wastes at U.S. Department of Energy (DOE) sites. In November 2004, the chairs of nine site specific advisory boards at DOE locations undergoing cleanup, including Hanford, recommended that the Department sponsor a National Stakeholder Forum, administered and organized by an entity independent of the Department of Energy (DOE), "to produce technically sound, fiscally responsible, politically acceptable, sustainable, and comprehensive solutions to DOE's system-wide waste and material disposition challenges."[1] This joint letter recognized DOE's responsibilities for multiple categories of radioactive waste and other materials, and recommended broad public participation in the National Stakeholder Forum.

The Bush administration rejected this recommendation. When Congress assigned DOE an additional materials responsibility, the long-term storage and management of elemental mercury (a non-radioactive substance but persistent bioaccumulative toxin nonetheless), the Department's response under the Obama administration was also deeply disappointing. DOE once again repeated past practices by choosing the inadequate, piecemeal approach of searching for recipients for a single category of toxic material. This tactic consistently smacks of an attempt to set states and regions against each other in the hopes of finding a location willing to accept a particular toxic category, or alternatively, a location that will object less strenuously than others. DOE's announcement that it was tasked with the additional responsibility for elemental mercury, a recognized persistent, hazardous substance, only reinforces the need for a National Stakeholder Forum.

We recognize that the Commission is not a National Stakeholder Forum, nor was it designed to be, and that DOE may have no interest in bringing this concept to the Commission's attention. Nonetheless, the Commission's Charter directs the Commission to include in its recommendations, "Options to ensure that decisions on management of used nuclear fuel and nuclear waste are open and transparent, with broad participation."[2] In addition, some Commission members have already voiced the sentiment that for its recommendations to be taken seriously, they will need to be acceptable to the general public. We recommend that the Commission seriously consider the National Stakeholder Forum as a means for encouraging broad public participation in decision-making on DOE's wastes and other materials challenges.

2. The environmental and financial history of reprocessing is overwhelmingly negative

The Commission's formal charter[3] does not contain the word "reprocessing," but it is clear that some members are enamored of this technology. Citizen opinion in Washington State on this topic is informed by the history of DOE's Hanford site. Reprocessing is the technology that produced plutonium for atomic weapons, along with 53 million gallons of highly radioactive liquid waste, now stored at Hanford in aging underground tanks that have exceeded their design lifetimes; and huge volumes of similar wastes at the Savannah River site. Reprocessing also contaminated land and groundwater at DOE sites,[4] which still require major remediation efforts decades later.

DOE plans to convert its liquid wastes from reprocessing to more stable solid forms. But progress to date has been inadequate: only a small portion of the high level radioactive inventory has been solidified at Savannah River. At Hanford, the Tri-Party Agreement for cleanup, signed by DOE as responsible party and U.S. EPA and the Washington State Department of Ecology as joint regulators, originally called for solidification to begin

[1] James C. Bierer, et al., National Stakeholder Forum on Waste Disposition, letter to Paul Golan, U.S. Department of Energy, November 24, 2004, at www.srs.gov/general/outreach/srs-cab/library/correspondence/golan112404.pdf.
[2] Blue Ribbon Commission on America' Nuclear Future, U.S. Department of Energy, Advisory Committee Charter, March 1, 2010, at www.nuclear.energy.gov/BRC/pdfFiles/BRC_Charter.pdf.
[3] Ibid.
[4] Draft Global Nuclear Energy Partnership Programmatic Environmental Impact Statement, U.S. Department of Energy, October 2008, DOE/EIS-0396, p. S-64.

by the end of 1999. But a Waste Treatment Plant is still under construction, years behind schedule and billions of dollars over budget.

We also note the sad history of the Nuclear Fuel Services (NFS), Inc. private reprocessing plant near West Valley, New York. In 1976, NFS decided that reprocessing was not economically viable, and abandoned over 600,000 gallons of highly radioactive liquid reprocessing wastes, leaving responsibility with New York State. In 1980, federal legislation gave responsibility for managing and solidifying these wastes to DOE. Vitification of the wastes into a glass form was completed in 2001, but other remediation activities continue at the former NFS plant site.

3. Atomic waste terminology and inventories

We urge the Commission to avoid the phrase "waste disposal," which currently is an unrealistic concept for high level atomic wastes. Responsible proposals amount to management and guardianship until radioactive decay reduces nuclides to levels considered acceptable; generally this takes 10 to 20 half-lives (reducing radioactivity by factors of approximately 1000 to one million, respectively). Radioactive decay can take millions of years for some radionuclides. This can apply to fission products, along with nuclides included in "Greater Than Class C" (GTCC) wastes. For example, Iodine-129 (half-life 15.7 million years) and Technetium-99 (half-life 213,000 years), are both fission products and GTCC components. We further urge the Commission to evaluate the radioactive inventory represented by such long-lived nuclides. Atomic waste management is complicated by the lack of technologies to destroy such substances.

4. Hanford is not a suitable site for atomic waste or hazardous chemicals from other locations

DOE remediation at Hanford is far from complete, including for the major identified risk from approximately 53 million gallons of liquid high level radioactive wastes, still temporarily stored in aging tanks that have exceeded their design life spans and have leaked in the past. A DOE facility to immobilize those wastes in a stable vitrified form is about eight years behind schedule and about $8 billion over budget. Moreover, with the current uncertainty over Yucca Mountain as a repository for DOE's own wastes, once Hanford high level wastes are immobilized, they may still need to be stored on site.

As presentations to the Commission noted, DOE has been eyeing Hanford as a repository for atomic wastes from other sites since at least the 1970s. More recently, DOE has designated Hanford as recipient of "mixed" radioactive and hazardous chemical wastes from other DOE sites; as a candidate site to receive Greater than Class C (GTCC) wastes from federal and commercial sources; as a potential location for Global Nuclear Energy Partnership facilities, which would generate new atomic wastes, and/or import them from other locations; and as a candidate site to store elemental mercury generated in the U.S.

At a 2007 public meeting in Troutdale, OR, an Oregon state official characterized opposition to bringing GTCC radioactive wastes to Hanford as distinct from "not in my backyard," but rather reflecting, "no more in our backyard because it is so horribly contaminated already."[5] This same consideration applies to other radioactive or toxic substances, and it would be unconscionable under these conditions to consider bringing a new category of toxic material to Hanford.

In addition, Washington State voters passed the Cleanup Priority Act in 2004 with 69% approval, a record margin for Washington State initiatives. We recognize that DOE succeeded in overturning this measure in the courts. Nonetheless, voters made clear their preference that DOE clean up all wastes at Hanford, including the tank wastes, and fully comply with environmental requirements before any new waste is imported to Hanford. DOE should recognize reality and respect this clear sentiment in determining where to send atomic wastes and other toxic substances. (The Obama administration has made a commitment to bring minimal new wastes to Hanford, at least until the vitrification plant to treat the tank wastes is fully operational).

[5] Annette Cary, Crowd says no to more waste at Hanford, *Tri-City Herald* (WA), August 28, 2007, electronic version at www.bluefish.org/wastehan.htm.

5. Proliferation considerations

We note that there is not a dime's worth of difference between technologies used with "Atoms for Electricity" and "Atoms for Bombs." Reactor technology, uranium enrichment, and reprocessing were developed during the Manhattan Project, and they remain "dual use" activities under which a nation can divert nuclear materials from a civilian program to a weapons program. Consideration of atomic technologies should recognize that the United States will lack credibility if it attempts to deny other nations access to technologies that it uses (reactors and uranium enrichment) in its own civilian atomic program.

6. Atomic waste and atomic socialism

The history of radioactive waste has been characterized by too many cases where public officials have been all too willing to assign management, and associated financial responsibilities, for commercial atomic wastes to the federal government. Some of this history was described by the Alliance for Nuclear Accountability, a network of approximately 36 organizations, "representing the concerns of communities in the shadows of the U.S. nuclear weapons sites and radioactive waste dumps," in written comments to the Commission submitted March 24, 2010.[6]

Presentations to the Commission have also provided examples where federal legislation consistently assigned the U.S. Department of Energy (DOE) responsibility for managing commercial radioactive wastes. After private uranium mill owners abandoned their facilities and their associated huge mill "tailings" piles, cumulatively representing hundreds of millions of tons, the federal government rewarded corporate irresponsibility by enacting the 1978 Uranium Mill Tailings Radiation Control Act. This Act gave the federal government the financial burden of managing the abandoned tailings, even though the U.S. Nuclear Regulatory Commission acknowledged subsequently that the piles, sources of radon gas and its "daughters" from radioactive decay, would "remain hazardous for extremely long periods of time, hundreds of thousands of years."[7]

As noted above, when Nuclear Fuel Services, Inc. abandoned its private reprocessing plant as an uneconomical enterprise, along with 600,000 gallons of highly radioactive liquid tank wastes in West Valley, New York, the federal government in 1980 was all too willing to reward corporate irresponsibility by accepting financial responsibility for solidifying and managing those wastes. The Department of Energy is still managing those wastes as the West Valley remediation project, which requires further cleanup.

In 1980, the Low Level Waste Policy Act among other features gave the Department of Energy responsibility for managing "Greater Than Class C" (GTCC) wastes, which include exceedingly long-lived nuclides. In 2007, DOE announced that it was searching for locations to store and manage those wastes, and identified several DOE locations as candidate sites[8]. In the process, the Department made available documents projecting that the predominant source by radioactive inventory of GTCC wastes would be the decommissioning of *commercial* atomic power plants. Once again, the federal government gave itself the task of managing radioactive wastes, with very long half lives as noted above, generated by private activities.

In 1983, the Nuclear Waste Policy Act became law, and it was amended in 1987, requiring that site characterization go forward only on Yucca Mountain, Nevada, as a national radioactive waste repository. Yucca Mountain was to store both federal and commercial atomic wastes, but commercial waste by far represented the largest portion. Among other features, the Act looked after the interests of the atomic power industry by leaving DOE with major financial obligations,

[6] Alliance for Nuclear Accountability, A Perspective On Nuclear Waste Policies For The Past 40 Years, Submitted to Blue Ribbon Commission on America's Nuclear Future, March 24, 2010, at www.ananuclear.org/Issues/GlobalNuclearEnergyPartnership/Library/tabid/56/articleType/ArticleView/articleId/302/Default.aspx.

[7] U.S. Nuclear Regulatory Commission, 45 FR 65525, October 3, 1980.

[8] DOE to Weigh Alternatives for Greater Than Class C Low-Level Waste Disposal, U.S. Department of Energy, Press Release, July 20, 2007, at www.gtcceis.anl.gov/documents/docs/GTCC_EIS_Press_Release_070720.pdf

to make payments to the atomic industry in the entirely likely event that public opposition succeeded in stalling the Yucca Mountain project.

We can identify no other energy source that burdens future generations and future taxpayers to such an extent through legislated federal responsibility for its wastes, and it remains to be seen if the government will succeed in collecting sufficient funds from the atomic industry to fund responsible waste management of these literally "toxic assets" far into the future. This situation represents an extreme and very long-term approach to privatizing profits while socializing costs.

The Commission is clearly dominated by members who wish to "preserve the atomic power option," and in turn have enabled, advocated, defended, and/or benefited from federal policies that provided financial support to the atomic industry for generations, and continue to provide financial support to an industry that still cannot compete in the marketplace. We do not dismiss the possibility of redemption, but the Commission's recommendations will not be credible if they include measures that continue to socialize the atomic industry's costs and management of its wastes. The Commission's deliberations should candidly acknowledge that an energy source that produces enormous amounts of radioactive wastes and then leaves it to the federal government to manage those wastes for millennia, is neither safe, clean, economical, nor responsible; and it certainly cannot be considered sustainable.

Sincerely,

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